Fact Sheet
Total Maximum Daily Load (TMDL)

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Section 303(d) of the Clean Water Act requires states to submit a list (the "303(d) list") of impaired surface waters. These impaired waters do not meet applicable water quality standards, and implementation of technology-based effluent limitations alone does not ensure attainment of applicable water quality standards. The list of impaired waters includes priority rankings for establishment of Total Maximum Daily Loads (TMDLs) for these waters.

Once the impaired waters are identified, Section 303(d) requires that the states establish **total maximum daily loads** (TMDLs) that will meet water quality standards for each listed water, considering seasonal variations and a margin of safety (MOS) that accounts for uncertainty. TMDLs establish the maximum amount of a pollutant that a waterbody can assimilate without causing exceedances of water quality standards.

What is a TMDL?
A TMDL is a tool for reducing water pollution in impaired waters. A TMDL calculates the amount of a pollutant that the waterbody can receive and still meet applicable water quality standards. Basically, a TMDL is the sum of the allowable loads of a single pollutant from all contributing point and nonpoint sources with a margin of safety that accounts for uncertainty. The TMDL also addresses reductions needed to meet water quality standards and allocates those reductions among the point and nonpoint sources in the watershed. As such, development of TMDLs is an important step toward restoring our waters to their designated uses.

How are TMDLs developed?
TMDLs are developed for the most critical environmental conditions, i.e., stream flow, temperature, weather conditions, etc., using data compiled in a particular geographic area or watershed from reliable sources. Scientifically accepted mathematical methods that represent what is happening in nature are used to develop the TMDL. A GIS (geographic information system) format may also be used to provide the framework for the model's information, particularly land use distributions. Data and information may include the relative contribution of different kinds of activities represented by point and nonpoint sources of pollutants. All of this information is then used to propose a TMDL that is appropriate for the specific waterbody.

What does a TMDL include?
A TMDL will include loads from point sources (such as municipal and industrial wastewater treatment facilities) and nonpoint sources (such as direct runoff from agricultural lands, urban areas, forested lands, etc.) in the watershed. TMDLs will look at impacts on waterbodies from many kinds of contamination, will consider seasonal variations, and will account for background levels of pollutants (those levels occurring in nature). TMDLs compare current loads and proposed loads with expected levels of reduction to achieve the water quality standards.

When does the public become involved?
The Clean Water Act and the Environmental Protection Agency's (EPA) implementing regulations provide for stakeholder involvement in the TMDL development. The public may participate in the TMDL development and implementation process through watershed organizations. Also, anyone is welcome to comment on a TMDL during the public notice period for the TMDL. A 30-day public notice period will be held following the publication for each TMDL. Any comments received during the public notice period will become a part of the TMDL administrative record and will be considered by the Kentucky Department for Environmental Protection prior to finalizing the TMDL report.

What is the TMDL approval process?
Following the public review and comment period and any necessary revisions, the states are required to submit their TMDLs to EPA for approval and, once EPA approves them, are to incorporate them into their permitting and watershed management programs. EPA must approve or disapprove state TMDLs within 30 days of final submission. If EPA disapproves a state TMDL, EPA must establish the TMDL.

How are TMDLs implemented?
Implementation of TMDLs refers to any combination of regulatory, nonregulatory or incentive-based actions that attain the necessary reduction in pollutant loading. Nonregulatory or incentive-based actions may include development and implementation of best management practices (BMPs), pollution prevention activities and habitat preservation or restoration. Regulatory actions may include issuance or revision of wastewater and stormwater permits to include permit conditions consistent with the TMDL. These permit conditions may be numeric effluent limitations or narrative requirements based on BMPs needed to achieve the necessary pollutant load reduction.